

Perry Mesa

Future Management Assessment



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Introduction

The Department of the Interior, in July 1999, initiated a public participation process to solicit input and advice about the future management and protection of the Perry Mesa region. The Perry Mesa Future Management Assessment was conducted to gather expert opinion and public comment on the possible designation of the Perry Mesa and Black Canyon area (map 1) as a National Monument, National Conservation Area (NCA) or other special designation. The process

was designed to obtain data on the important resources in the area and to accumulate scientific and public comment on the appropriateness of various management options. The assessment was conducted through a Science and Resources Forum and three public open houses. The information was compiled for the Bureau of Land Management (BLM) by Lefkoff and Associates and is presented in Appendices 1 through 4 of this report.

Background

The BLM's Phoenix Field Office administers 112,637 acres of public land within the Perry Mesa/Black Canyon area, located entirely within central Arizona's Yavapai County. Some 48,000 acres are within the Perry Mesa National Register Archaeological District, including approximately 11,500 acres administered by the U.S. Forest Service on the eastern third of Perry Mesa.

In addition to its highly significant archaeological and historical resources, the area contains 73 miles of sensitive riparian habitat, with approximately 21 miles of the Agua Fria River determined suitable for designation as a wild and scenic river. The entire area has been and continues to be the focus of intensifying recreation use from the burgeoning population of central Arizona. The largest archaeological sites in the area have been heavily vandalized in past decades and continue to suffer degradation.

The BLM segregated a 113,000-acre area of the Perry Mesa/Black Canyon region on August 6, 1999 for a period of up to two years, temporarily segregating the area from location and entry under

the general land laws and mining laws. During the segregation period, existing uses will continue, including: livestock grazing; access to valid mining claims and patented claims; rights-of-way, access to non-federal lands and interest in lands; current recreation uses and commercial uses being conducted under special-use permits.

It is the goal of the Department and the BLM to protect the Perry Mesa region and to enhance the appreciation, educa-



tional opportunities and visibility of this area. This report provides an overview of the process used to facilitate future management of the region.

Resource Overview

The Perry Mesa and Black Canyon region consists of two geographically distinct, but adjacent settings: (1) the Perry Mesa segment, which includes Perry Mesa proper, the adjacent but smaller Black Mesa, the Agua Fria River Canyon and adjacent public lands to the north; and, (2) the Black Canyon segment, which contains lower elevation areas to the west of Perry Mesa, along Black Canyon Creek and its tributaries and the low hills to the west along Black Canyon Creek.

The region is bisected by U.S. Interstate Highway 17, the principal access route, as well as by at least one county road. It is located entirely within southeastern Yavapai County and is approximately 115,200 acres in size. The BLM administers 112,637 acres, the State of Arizona has 65 acres and there are 2,500 acres of private land, largely focused on ranch headquarters. The towns of Black Canyon City and Cordes Junction lie to the south and north, respectively. The Phoenix metropolitan area is approximately 40 miles to the south along I-17, with Prescott lying approximately 35 miles northwest. The Tonto National Forest administers approximately 11,500 acres of Perry Mesa to the east of the BLM lands.

The Perry Mesa area contains one of the most significant complexes of late prehistoric sites in the American Southwest. Between A.D. 1250 and 1450, its pueblo communities were populated by up to several thousand people. During this time, many areas were abandoned, and groups became aggregated in a relatively small number of densely populated areas. These areas contain important scientific information for researchers study-

ing the cultural, social and economic processes that accompanied this period of significant change.

At least 450 prehistoric sites are known to exist on Perry Mesa, and there may be hundreds more. There are seven major settlements, consisting of stone pueblos or clusters of pueblos, each containing at least 100 rooms. The large pueblos, typically situated at the edges of steep canyons, offer a panorama of ruins, distinctive rock art panels and visually spectacular settings. Other sites include structures ranging in size from one to 100 rooms, petroglyphs, food processing areas and agricultural fields.

Perry Mesa's semi-desert grassland is dissected by the canyon of the Agua Fria River and by canyon tributaries to the Agua Fria. It ranges in elevation from 600 feet above sea level along the Agua Fria River to about 4,300 feet in the northern hills. Approximately 52 miles of streams, lined with riparian habitat, exist along the Agua Fria River and its tributaries, 43.5 miles of which are BLM-administered. Wildlife is abundant and diverse, including pronghorn, mule deer and white-tailed deer. Javelina, mountain lions, small mammals, reptiles, amphibians, fish and neotropical migratory birds also inhabit the area. Special status species include four native fish species, desert tortoise, common black hawks and lowland leopard frogs.

To the west of Perry Mesa, the Black Canyon segment includes Black Canyon Creek and its tributaries, as well as the low range of hills west of the creek. Elevations range from 1,970 feet above sea level along the creek to 4,068 feet in the northern hills. Vegetation communities are largely Sonoran Desert Scrub,

with elements of Interior Chaparral in the higher hills. There are approximately 21.6 miles of riparian habitat along Black Canyon Creek and its tributaries; all but 0.6 miles are BLM-administered. The riparian community is largely cottonwood/willow. Wildlife species making their homes here include mule deer, antelope, javelina, mountain lions, small mammals, reptiles, amphibians, fish and neotropical migratory birds. Special status wildlife species include one native fish species, the desert tortoise and the lowland leopard frog.

Cultural resources within the Black Canyon segment are rich and varied. Many sites dating to the prehistoric and historic periods exist in a variety of environmental situations. Many sites have been recorded in the eastern portion, below Black Mesa, and on the valley floor. Prehistoric sites include masonry structures, generally containing 1 to 10 rooms, but some containing up to 100 rooms. Many of these structures are



described as forts and are located on hill-tops. Prehistoric sites also include artifact scatters and petroglyphs. Historic sites include the remnants of structures and artifacts associated with the area's history of mining, ranching and sheep herding.

The Perry Mesa Area of Critical Environmental Concern (ACEC), incorporating 9,440 acres, was designated in 1988 to protect its cultural resource values. The Perry Mesa National Register District, originally designated in 1974, was expanded in 1996 to encompass approximately 48,000 acres administered by the BLM and the Tonto National Forest. It is one of the largest prehistoric districts listed on the National Register of Historic Places. The Yavapai, Hopi and other tribes regard Perry Mesa as a traditionally important area. South of the Perry Mesa ACEC is the Larry Canyon Area of Critical Environmental Concern, designated in 1988, which includes 80 acres of rare pristine riparian deciduous forest within a Sonoran Desert ecosystem.

The BLM has defined a 22.4 mile reach of the Agua Fria River that exhibits outstandingly remarkable scenic, fish and wildlife habitat and cultural resource values. Of this portion of the river, 20.8 miles are within public land.

The river traversing Perry Mesa includes a proposed "wild" segment of 10.3 miles in the canyon, bordered on both ends by two proposed "scenic" segments totaling 12.1 miles. The segment of the Agua Fria River within the Perry Mesa/Black Mesa area was determined to be suitable for designation in the Arizona Statewide Wild and Scenic Rivers Legislative Environmental Impact Statement.

The cultural and natural resources of Perry Mesa are threatened by vandalism and other activities. Illegal excavation, artifact collecting and other activities have damaged archaeological sites and remain a continuing threat to their integrity. The sites on Perry Mesa

are currently monitored by the Arizona Site Steward Program and the Civil Air Patrol. In 1995, two men were convicted of violating the Archaeological Resources Protection Act (ARPA) for removing artifacts from sites on Perry Mesa. The Yavapai-Prescott Tribe assisted the BLM in its criminal investigation. Due to the significance of the resource values, an earlier vandalism case on Perry Mesa was one of the key catalysts in the passage of ARPA.

Management by the BLM and the Tonto National Forest within the National Register District includes: 1) mapping several of the large pueblos in conjunction with a study of site vandalism; 2) completing a cultural resources overview; 3) completing an archaeological survey of 1,100 acres; and, 4) preparing the documentation for the expanded National Register District, for which the agencies received a Governor's Award for Historic Preservation in 1995. Previous scientific studies include surveys and limited site excavations by Southern Illinois

University and recording of petroglyph sites by the University of California. Scientific studies have been limited to a few of the smaller sites on the mesa. The Museum of Northern Arizona currently is studying the defensive aspects of Perry Mesa sites.

There are eight active grazing operations (ranches) utilizing public lands within the Perry Mesa/Black Canyon area. Perry Mesa has no known potential for oil and gas development and there is no known interest in exploration. Much of the Perry Mesa/Black Canyon area, including the approximately 52,300 acres of acquired land on and around Perry Mesa itself, have never been open to mineral entry. There are approximately 350 active mining claims and several mineral materials operations in the Black Canyon area. Off-highway vehicle (OHV) use is limited to designated roads and trails on the public lands. OHV use is growing at a dramatic rate, with resulting impacts to cultural and natural resources.

Science and Resources Forum

The BLM hosted a Science and Resources Forum on August 31, 1999, inviting a full range of technical experts including biologists, archaeologists, recreation planners, range conservationists, geologists and others with a knowledge of the Perry Mesa area. Facilitated by a private consultant, participants worked in a natural resources subgroup and a cultural resources subgroup to discuss and identify values and management options. The meeting concluded with a plenary session summarizing the discussions of the working groups.

Participants recognized the ongoing and increasing threats to the resources. While continued multiple use of the region was validated by a majority of workshop participants, the natural resources subgroup identified over-grazing, fire suppression and brush encroachment as continuing threats to the health of the antelope, the riparian areas and the grasslands. The cultural resources subgroup additionally identified off-road vehicle impacts and unauthorized digging at archaeological sites as immediate threats. This subgroup also identified increased access and visitation without additional management strategies and resources as an additional threat.

Participants had consensus that lack of adequate resources and personnel severely hamper existing management efforts. Some were concerned that additional protection would require increased management staff and funding, and many were doubtful that the resources

would be forthcoming. Others were fearful that so much focus on the area has alerted the public to its attractions, and further protection is now absolutely necessary. A majority of the participants observed that the urgency of the situation requires further protection, however the natural resources subgroup was divided between favoring National Conservation Area or National Monument designation. Specific comments recorded at the forum are listed in Appendix 1.



The following critical themes were identified by forum participants:

1. Perry Mesa is a unique and significant resource that deserves protection, while continuing a history of multiple use.
2. The overall condition of the resource merits protection.
3. The landscape is relatively unchanged from prehistoric times.
4. The viewshed is in excellent condition.

5. There are few roads.
6. The majority of archaeological sites are in good condition, although the largest pueblos have received considerable damage from artifact hunters.
7. Threats and stress on the resources must be taken seriously. The antelope are in poor condition and declining. Brush is encroaching. There are many degraded grasslands and riparian areas. Soil loss and incursion of exotic plants is increasing. Overgrazing continues to be a problem in some of the area. There is an increase in visitation and vandalism. OHV use continues to cause damage. Urban sprawl and population growth continues to put pressure on the resources.
8. Inadequate personnel and management resources have allowed problems to increase. If appropriate funding and resources were available to meet existing management mandates, the present level of protection would be enhanced.
9. Additional protection, such as designation as a National Conservation Area or National Monument, is worthy of consideration as long as the needed funding and resources are tied to the new management strategy.

Public Open Houses

Using the results of the Science and Resources Forum as informational background, three public open houses were hosted by the BLM on September 13, 14 and 16, 1999, to gain the public's input on the issues surrounding the area. The public sessions were held in north Phoenix, Black Canyon City and Mayer, Arizona. A press release was issued to statewide news media announcing the open houses. All mining claimants and ranchers in the region were sent flyers announcing the events. All participants in the Science and Resources Forum were invited to attend. The Arizona congressional delegation was also notified.



The setting for the open houses was informal. Three stations were set up at each of the open houses: Natural Resources, Cultural Resources and Current/Future Management. Each station was staffed by BLM and Forest Service specialists who were available to answer public inquiries and engage in a dialogue with community participants. A fact sheet, overview of existing manage-

ment practices and definitions of potential management designations (see Appendix 5) were provided, along with maps of the region. Each participant was asked to complete two forms. The first solicited feedback about the various resources of Perry Mesa; the second asked questions about types of management designations for the region.

Approximately 100 people attended the public open houses. Generally, those participating can be identified as reflecting three major constituency interests: 1) those wanting increased protection for the area; 2) those interested in protecting the cultural and natural resources of

Perry Mesa, but concerned about their ability to use the area for recreation, mining, ranching and other activities; and, 3) those wishing the area to remain under current management practices. Most members of the public, in addressing issues and concerns, concentrated on the management of Perry Mesa and Black Mesa, rather than the entire region, which crosses both sides of Interstate 17, the major transportation corridor between

Phoenix and Flagstaff, Arizona. Both sides of the Interstate are known to contain a variety of natural and cultural resources.

The majority of respondents at the public open houses were in favor of a national special designation, with an emphasis on the protection of archaeological resources. Continued multiple use, including ranching activities and

hunting, were considered acceptable, as long as site protection was insured. Many respondents wanted to see recreational opportunities limited to non-damaging activities. OHV use was considered a threat to all resources.

Those favoring designation preferred National Monument status for Perry Mesa. Designation as a National Conservation Area was also popular. Comments suggested that Monument status provided the best opportunity for protection, as well as interpretation, for the cultural and scenic resources. Several respondents noted that a National Monument draws the public's attention, while few understand what a National Conservation Area provides in terms of protection, research opportunities and public interpretation.

Those favoring designation overwhelmingly stated that the Perry Mesa and Black Mesa area, containing the National Register District, ACECs and the Agua Fria River at a minimum, should be included within the boundary of a monument or other designation of a special management area.

Reasons for opposition to any kind of special designation clustered into two main themes. The first was a concern that designation would increase attention to the area, thus increasing impacts. It was observed that the area is relatively undisturbed now and designation would draw an untold number of new visitors with their associated impacts. The second theme reflected a general mistrust of government, with concerns expressed about possible use restrictions for the area and the possible imposition of user fees.

The majority of those opposed to designation were, however, in favor of protecting the archaeological resources. Some suggested developing a few of the major sites for visitation, leaving the remainder of the area subject to current

management practices. Many respondents who suggested status quo management for the region, stated that if the existing laws were enforced, designations would not be necessary.

A total of 68 distinct Value Identification responses were received, including 38 from the Phoenix open house, 12 from Black Canyon City, and 10 from Mayer. Eight additional responses were mailed to the BLM. A total of 74 distinct Management Options responses were received, including 36 from Phoenix, 15 from Black Canyon City, 13 from Mayer and an additional 10 that were mailed to the BLM office. A summary of the responses received is provided in Appendix 2.

Some clear themes emerged from the open house responses:

1. Overwhelming support emerged for protection and preservation of most, if not all, of the prehistoric archaeological sites on Perry Mesa, Black Mesa and associated waterways and travel corridors. There was significant appreciation for the importance of the sites and their value, especially in light of the growing population of Phoenix and its steady encroachment on the mesas north of the city.
2. Concern was expressed that any designation would deprive present land users and visitors of access to areas they had used for many years for various purposes, including cattle grazing, placer mining and rockhounding as well as exploring by foot.
3. Strong views were expressed that whatever designation occurs, the area should not be exploited, no significant development should be proposed, and any substantial interpretive facilities should be limited to places most visited by travelers.

Summary

Participants of the Science and Resources Forum and the Public Open Houses were overwhelmingly in favor of protecting the archaeological and natural resources in the area.

Opinions were mixed as to whether a special national designation is needed. Concern was expressed by some that a designation could restrict current use or cause even greater impact on the resources.

The majority of participants of the Forum and the Open Houses did favor designation, and supported a National Monument or a National Conservation Area designation as a means of protecting the area. Most comments reflected the view that special designation would bring increased recognition and additional resources that would enhance management and protection.

Appendix 1

Comments Recorded at the Science and Resources Forum

Value

Perry Mesa was identified as containing a unique, extensive and intact settlement system comprising one of the most significant complexes of late prehistoric archaeological sites in the American Southwest. It is one of the very few places where it is possible to apply landscape archaeology - to look at the totality of sites and agricultural systems and the interactions and relationships among these elements.

The sites on Perry Mesa contain not only large residential units, but smaller sites that tie the system together. Perry Mesa also is part of a much larger system, with connections to the Phoenix basin to the south, Big Sandy to the west and the Mogollon rim to the north and east.

The sites of Perry Mesa offer interesting interpretive opportunities. The sites and the landscape are observable and understandable by non-specialists. The standing structures can be a focus of visitation. The growing population in the Phoenix area is interested in Arizona's past, and Perry Mesa can contribute to the public's understanding of the past. The area also contains archaeological sites representing early Anglo-American history through the 19th century, e.g., remnants of Basque sheep camps, historic mining water features and military history.

Yavapai tribal elders describe Perry Mesa as a library where traditional knowledge, wisdom and history can be found. This is important not just to Native Americans but to all Americans. Perry Mesa reflects the importance of the Native American past and provides

opportunities to contribute to the understanding of Native Americans' stories.

Perry Mesa is also historic in terms of archaeological resource protection. The first case ever to be prosecuted under the 1979 Archaeological Resources Protection Act resulted from illegal pothunting on Perry Mesa. The area can serve as a teaching example of how vandalism is stealing from all Americans.

A multitude of natural resource values were also identified by Forum participants. These included outstanding scenic values and outdoor recreational opportunities, including hunting.

Perry Mesa is known for its pronghorn antelope herd and for the unique grassland that supports the herd. Riparian areas also support species diversity including special status species and wildlife in general.

Perry Mesa supports traditional values such as cattle ranching. The area provides feed for domestic animals as well as wildlife.

Condition of the Resource

Much archaeological content has been lost, however a significant amount remains relative to other late prehistoric sites elsewhere in Arizona. Despite substantial pothunting, scientists know from other pueblo sites, e.g., Homolovi, that a great deal can still be learned from the Perry Mesa sites. Small sites that are not very deep have been damaged the most.

When assessing condition, it is important to consider the level at which the assessment is made. At the broad settlement system level, the condition of the resource is excellent. Even at the

level of many individual sites, e.g., residences, rock art and agricultural features, damage is mostly cosmetic. However, at the level of some other individual sites, e.g., cemeteries, damage is heavy.

Perry Mesa is an entire, complete system, and the relationships among the sites on Perry Mesa are still intact. The condition of Perry Mesa's architectural features, and what can be learned from them, is still very complete. Rock art sites are still in excellent condition.

The condition of the landscape is excellent. It is similar to what it was in prehistoric times. The viewshed is in excellent condition.

The antelope herd was identified as being in poor (declining) condition, as was other big game (mule deer/whitetail deer, javelina).

The grassland condition varied depending on location and what management is present. Areas where prescribed burns have been conducted are in better condition. The area needs more fire. Brush encroachment is impacting grassland.

Riparian areas vary from pristine to impacted, as a result of such uses as grazing, OHV riding, and hydrologic changes to the system.

Primary Threats to the Resource

Off-highway vehicle use off of existing roads was viewed as potentially damaging to both cultural and natural resources.

Unauthorized digging at sites has been relatively light in recent years due to the public's increased awareness of the legal penalties and the harm such activity does to the resources.

Increased visitation and greater access will be inevitable in the future. Special designation would increase use, and there would be increased pressure to

include Perry Mesa on tour routes as a heritage tourism destination. However, designation would probably reduce vandalism to sites.

The Yavapai-Prescott Tribe feels that without special designation, threats to the resource will continue and worsen.

Special designation will not automatically increase protection. The resources on Perry Mesa will continue to be at risk if funds and staffing are not increased to meet higher public expectations and use that designation would create. Failure to provide a special designation, particularly after the area has received recent attention and publicity, would constitute a threat to the resources because increased, uncontrolled public use will inevitably result, and the agencies are not equipped for this impact.

Demand will increase to conduct recreational tours on Perry Mesa, e.g., cattle drives for executives, commercial archaeological tours. More use and notoriety will result in more damage by vehicles, unauthorized collecting and vandalism.

Air pollution and light pollution at night will increase as surrounding populations grow.

Plans are being considered for a theme park in Cordes Junction, and a new Interstate 17 bypass cutting through Perry Mesa. These types of developments, along with the increased visitation they will create, will continue to threaten the archaeological resources in the area.

Prescott Valley will continue to develop, and Black Canyon City will expand. Failure to become familiar with long-term growth and development planning for the surrounding communities constitutes a threat in itself for Perry Mesa.

Dumping of hazardous materials on Perry Mesa will increase as surrounding populations grow and areas like this become the "backyards" of urban sprawl.

Grazing is a threat to natural resources, particularly wildlife species, and it contributes to watershed degradation. Exotic plant and animal species compete with native species.

A lack of fire in the grasslands ecosystem contributes to brush encroachment which competes with the native grasses.

Ranking the Immediacy of Threats

Cultural Resources Subgroup

The threats identified below are ranked in order of their importance, i.e., the most serious threat is listed as number 1, the second most serious as number 2, and so on. The letters following each threat (H, M and L) indicate the immediacy of the threat (H = high, occurring now; M = medium, occurring within 5-10 years; L = low, occurring within 10-20 years).

1. Increased, uncontrolled visitation (M)
2. Lack of agency personnel and funding to adequately protect and manage the area (H)
3. Urban sprawl (M). Note: the immediacy ranking is based on the fact that developments are being planned within the next few years, even though the impacts will not occur until the future.
4. Proposed Interstate 17 bypass through Perry Mesa (M). Note: the immediacy ranking is based on the fact that the bypass is being planned within the next few years, even though the impacts will not occur until the future.
5. Off-highway vehicle impacts (H).
6. Unauthorized digging at archaeological sites (H).
7. Air and light pollution (L).

Natural Resources Subgroup (the following comments were provided but immediacy of threats was not ranked):

- wildlife (e.g., pronghorn, native fish) are indicators of grassland health; if they are not healthy, grassland health is not in proper functioning condition.
- all threats have been going on for 100 years.
- all threats could be alleviated now with present authority.
- threats will increase if unchecked - as numbers of people increase.
- fire suppression is not ongoing but effects of it in past are lingering.

Management Opportunities or Strategies

Use a zoning approach to direct activities appropriately, e.g., allow various uses in areas where they won't impact archaeological sites, while restricting access in other areas where such uses would threaten archaeological values.

Special designation would allow more control over non-agency planning and public use. The stronger the designation, the more protection it could afford. Make the designated area large enough to provide adequate protection. Do not focus it too tightly, or it will not do the job intended.

Ensure that research uses are allowed by agencies and qualified non-agency researchers under authority of permits, because research potential is a core value of the area.

Acquire remaining private inholdings where owners are willing, e.g., "Point Extreme" and the confluence of Squaw Creek and the Agua Fria River.

Develop a transportation plan to control access and address zoned accessibility as a management tool.

Explore regional opportunities for partnerships, i.e., partnering with Native American tribes to help manage the area.

Promote opportunities to interpret the cultural resources for their educational, as well as recreational benefits, taking into account the perceived and potential public benefits.

Interpret the way humans have used the landscape over time; all activities and all ethnic groups, not just Native American prehistory.

Multiple uses of Perry Mesa are acceptable, as long as such uses are managed so that they do not diminish the integrity of the cultural resources.

Consider a National Wildlife Refuge, National Conservation Area or a larger ACEC with management prescriptions.

Congressionally charter a formal “partnership” among agencies to implement existing Memoranda of Understanding, plans/policies, including public input.

Appendix 2

Summary of Public Responses Relating to Management of Resources

1. Archaeology/History

A majority of the responses at the public open houses favored protection of the archaeology of the Perry Mesa/Black Mesa region, for varying reasons. The largest number of comments, 45 percent, expressed protective preference as preservation in a museum-type manner, with sites protected, preserved, interpreted and available for academic research. The remainder wanted protection because of the intrinsic importance of the area and its beauty.

About 18 percent of the responses favored public access to the site for exploration, amateur archaeology, school field trips and other recreational pursuits within the context of the archaeological assets.

A smaller number of responses, 15 percent, did not favor any change to the present status of the region. These comments expressed opposition to any access restrictions, opposition to any more federal ownership of land and opposition to any national designation.

A slightly smaller number, 13 percent, favored protection of archaeological sites to prevent vandalism and to serve as a blockade to development. Some advocated protection of the most important sites, noting that it may be impossible to protect every site.

2. Wildlife

Nearly half of the responses favored actions that would benefit the declining antelope populations of Perry Mesa and Black Mesa, as well as improving habitat, riparian areas and grasslands to benefit all wildlife species. About one-third commented on the need to maintain a healthy antelope population, and an additional 14 percent provided broadened comments to include healthy habitat for all animal species on the mesas, including mammals, fish, amphibians and birds.

About 20 percent of the responses favored some hunting in the region. Another 10 percent said cattle grazing should be restricted and overgrazing should be prohibited.

3. Recreation

More than one-fourth of the responses favored some form of restrictions on the type of recreation that should be permitted at Perry Mesa and Black Mesa. They favored remoteness, primitive trails and undeveloped roads to minimize human impact.

Strong sentiment was expressed by a number of responses, 21 percent, calling for a total ban on off-road and all-terrain vehicles or strict restrictions in the area.

A slightly smaller number of responses, 17 percent, indicated that many

types of recreation would be suitable for the area, noting that the mesas can be appreciated in many different ways. A small but significant number of comments, 15 percent, indicated that hiking was their primary preference for the type of recreation that should be allowed.

4. Ranching

A substantial majority of the responses, 56 percent, called for close management of cattle to prevent damage to the land and archaeological artifacts. Specific comments recommended special restrictions in riparian areas. Approximately one in five responses, 19 percent, called for elimination of cattle grazing from the area, or at most, nominal grazing. Seventeen percent of the responses indicated a preference for no change in grazing management, favoring continuation of the open range.

5. Water Resources

More than 70 percent of the responses favored some type of action to protect the water resources around Perry Mesa and Black Mesa. About 28 percent indicated the restoration and preservation of Agua Fria River, including eradication of invasive plant species, to be a priority in order to save the habitat and native species of the riparian area.

About one-fourth, 27 percent, of the responses said protection of water resources had an equal or nearly equal priority as preservation of the archaeological assets. Steps to manage land for erosion control and water quality were favored. Twenty percent of the responses favored restrictions on cattle grazing and human recreation in riparian areas.

6. Geological Resources

Geological resources on Perry and Black Mesas were identified in two main themes: 1) as naturally occurring land forms that are aesthetically valuable and important to understand the geologic evolution of the area; and, 2) as valuable mineral resources that, if mined, would provide economic value to the growing area of Arizona.

Twenty-nine percent of the respondents indicated they favored preservation of geological resources in their natural form, rather than the extractive form, and favored steps to preserve the natural geological features of the area. However, an equal number of respondents indicated that mining claims exist on the mesas and should be honored, and may be needed to support the growing population of Arizona.

Nearly one-fourth of the total favored an outright ban on mining in the region. One-tenth of the responses favored a willingness to allow some form of small-scale mining, primarily recreational or placer mining.

7. Scenic Views

Almost all of the responses concerning the spectacular vistas of the area included a variation of the same theme: the views must be protected, especially from the heavily traveled Interstate 17 corridor.

Half of the responses favored restrictions on activities that would interfere with views of the landscape. Included were comments about the power lines that now follow I-17 on the east side of the highway and the fears of visual obstructions due to

potential tourism development and the desirability of dark skies at night.

Another substantial number of responses, 24 percent, merely described the vistas of Perry Mesa and Black Mesa in superlative terms: fantastic, extraordinary, spectacular and outstanding.

A smaller number of responses, 20 percent, favored access to more remote areas so that views of remote areas could also be enjoyed.

8. Vegetation

A majority of responses, 58 percent, favored protection and restoration of the natural vegetation. A majority expressed concerns in terms of the intrinsic value of natural lands and the need to prevent damage by human activity, while others discussed management objectives in terms of restoration of native vegetation that had been damaged in the past, including damage to riparian areas, grasslands, and the loss of native plant species.

A smaller number, 19 percent, said livestock should be better managed or eliminated to protect the native vegetation of Perry Mesa and Black Mesa.

About nine percent indicated fears that any human encroachment or urban development would damage the area's vegetation, and an equal number said they favored the status quo with respect to management of the vegetation.

9. Economic Opportunities

More than one-third of the responses, 36 percent, opposed substantial development of the Perry Mesa and Black Mesa area, but would agree to some form of non-exploitative development.

A smaller number, 28 percent, cited numerous opportunities for economic development, primarily tourism. However, about one-third of those responses indicated a preference for less-intrusive activities, such as hiking, hunting, birdwatching and archaeological tours. Bed and breakfasts, backcountry tours and other forms of tourism were also cited.

About 11 percent of the responses said a visitor center associated with national designation would benefit the area by drawing quality tourism to the major corridors without damaging archaeological ruins.

Summary of Public Responses Relating to Options for Special Designation

Should there be a special federal designation?

Most of the responses were in favor of some type of special designation, with the values expressed in different ways.

Half of those favoring special designation gave as reasons their desire to protect unique and valuable archaeology, and recommending greater visibility, education and funding to carry out the preservation. The other half favored a

special designation to prevent potential damage to the properties from various sources, including population pressures from Phoenix northward, to prevent vandalism and to serve as an open area for present and future residents of the Phoenix area.

Those opposing special designation expressed two major concerns. More than a quarter of the total responses, 27 percent, said they would not welcome designation because it would mean restricted access for presently lawful activities, that the study for designation was unnecessary, that the federal government cannot presently manage the areas, and exposure would only make it worse.

Others in opposition to a designation, 11 percent of the responses, said exposure would merely create a tourist mecca with expected negative effects, including vandalism.

What should the boundaries be?

There was no clear consensus on specific boundaries for the proposed designated area. However, the greatest number of responses, 34 percent, said the area should include at least Perry Mesa, Black Mesa and the associated slopes of each mesa. Others recommended the inclusion of corridors used for travel between the pueblos. Others recommended the Agua Fria River and other creek watersheds.

Another 26 percent offered those same areas and added other territory

extending from Black Canyon City to Cordes Junction, or at least the Bloody Basin interchange. The eastern boundary was not well defined by any significant number of respondents.

Another 18 percent of the responses indicated that if any boundaries were to be set, they should contain as little area as necessary to protect only the most important sites. Those responses included comments indicating opposition to the BLM acquiring stronger control of additional land and questioned the political motives for proposing the designation.

If a special designation is made, what should it be?

About one-third of the respondents, 34 percent, favored a special designation of either a National Monument or National Conservation Area, or listed their preference in the alternative. Of the 18 responses received, eight favored a monument, one favored a conservation area and eight favored one or the other.

One fourth of the responses, 23 percent, indicated a status quo preference. The respondents indicated that existing laws could be better enforced, some better management practices could be employed, but no special designation should be given to the area.

A smaller number, 11 percent, did not favor a special designation but indicated that Perry and Black Mesas should remain rugged and hard to reach.

Appendix 3

Public Open House Comments — Options for Management

Frequency of Comment

Values Categories	Number of responses	First	%	Second	%	Third	%	Fourth	%
1. Archaeology /History	80	Protection, preservation, interpretation, research, intrinsic value, beauty	45	Public access, amateur archaeology, exploration, school trips	18	Leave it alone, do nothing, no more government control	15	Prevent vandalism, protection of most important sites, buffer for urban development	13
2. Wildlife	70	Healthy antelope herds, re-establish pronghorn, establish stable, healthy population	33	Permit limited hunting	20	Healthy habitat for mammals, fish, amphibians and birds	14	Restrict cattle, prevent overgrazing	10
3. Recreation	86	Restrictions and limits on amount and types of use, maintain primitive and remoteness	27	Prohibit or strictly restrict off-road vehicle	21	Many types of recreation are suitable	17	Hiking is preferred use	15
4. Ranching	59	Allow cattle if carefully managed to prevent damage to land, archaeology	56	No cattle grazing or nominal	19	No restrictions, open range	17		
5. Water Resources	40	Restore, preserve Agua Fria River, habitat and native species	28	Protection equal to archaeology, manage for erosion control and quality	23	Restrict cattle grazing and recreation in riparian area	20		
6. Geological Resources	41	Natural geology should be studied, with interpretive displays	29	Mining claims exist, should be honored, may be needed	29	No mining at all	24	Recreational, rockhounding, placer mining	4

7. Scenic Views	46	Prohibit or limit visual impacts, dark sky, move power lines	50	Fantastic, extraordinary, spectacular, outstanding views	24	Access to scenic areas for enjoyment	20	As is	9
8. Vegetation	43	Natural lands are interesting, special, important in their natural state, restore grasslands, riparian areas, eliminate non-native species and encourage native species	58	Livestock management or elimination of grazing	19	Human development and impact will damage vegetation	9		
9. Economic Opportunities	53	No use, limited use or no exploitation of the land for economic purposes, use only if it benefits preservation	36	Ample opportunities through tourism, visitation, lodging, tours	28	National Monument, park, conservation area, visitor center	11		

NOTES

- . Sixty-eight (68) responses from three public comment sessions and mailed in were aggregated into one database.
- . The analysis is based on 47 complete responses containing all nine values categories, and 21 partial responses containing the first four values categories. The second page of the two-page values identification form was not available for those 21 responses.
- . Some respondents gave multiple responses.

Appendix 4

Comments from Public Open Houses — Options for Special Designation

Frequency of Comment

Management Options	Number of responses	First	%	Second	%	Third	%	Fourth	%
1. Special Designation?	89	Yes, to protect unique and valuable characteristics through National Monument or National Conservation Area, visibility, education, funding	28	Yes, to mitigate population and urban growth, prevent vandalism, land use damage	28	No, keep status quo, leave it alone and enforce existing laws; access would be restricted, study is a waste of time, federal government can't manage it and would make it worse	27	No, it would create a tourist mecca with adverse effects, usage would increase and would attract vandalism	11
2. Boundaries	73	Entire mesa, at least all of Perry and Black Mesas and associated corridors and outliers	34	Specific boundaries mentioned, Black Canyon City, I-17, Cordes Junction, Bloody Basin Junction	26	As little as possible, none at all, it's a BLM land grab, enforce existing laws, political motives	18		
3. Management	53	National Monument or National Conservation Area	34	Status quo, multiple use, enforce existing laws	23	No development, natural state, no amenities, should be hard to find	11		

NOTES

- Seventy-four (74) responses from three public comment sessions and mailed in were aggregated into one database.
- The analysis is based on sixty-seven (67) complete responses containing all three management options questions, and seven (7) partial responses containing the first two options questions. The second page of the two-page management options form was not available for those four (7) responses. Some respondents gave multiple responses to each question.

Appendix 5

Special Designation Types

National Monument

National Monuments are designated by the President of the United States under the authority of the Antiquities Act of 1906 or by Congress through legislation. The President is authorized to designate National Monuments by proclamation for the purpose of protecting, caring for and managing “historic landmarks, historic and prehistoric structures and other objects of historic or scientific interest.” The President may reserve such federal lands as are necessary for this purpose. The proclamation or legislation which establishes a National Monument includes basic prescriptions governing how the area will be managed. Subsequent management plans prepared by the agency administering the area fill in the details of this basic framework. While most people associate National Monuments with the National Park Service, the Bureau of Land Management and the U.S. Forest Service also administer National Monuments. The BLM manages one of the largest National Monuments: the Grand Staircase-Escalante National Monument (1,684,899 acres) in southern Utah, established by President Clinton in September 1996.

National Conservation Area

National Conservation Areas (NCAs) are designated only by congressional legislation. The legislation establishing a particular NCA sets the tone for how the area will be managed and is uniquely tailored to ensure the most appropriate protection or use of the resources involved.

NCA legislation can range from very protective, where consumptive uses are highly restricted or prohibited, to more multiple-use oriented, where a greater variety of public activities are allowed. Like National Monument proclamations, NCA legislation may provide for any combination of uses in various portions of the designated area, e.g., mining may be allowed in some locations but not others, or off-highway vehicles may be used in some parts of the area while other parts may allow only non-motorized access. Subsequent management plans are written to translate the legislation’s management framework into more specific actions. There are eight NCAs in the United States, all administered by the Bureau of Land Management. Two of these are in Arizona: the San Pedro Riparian National Conservation Area (54,189 acres) near Sierra Vista, and the Gila Box Riparian National Conservation Area (21,767 acres) near Safford.

National Recreation Area

Like NCAs, National Recreation Areas (NRAs) are designated by Congress. Many of the early NRAs consist of lands formerly withdrawn by the Bureau of Reclamation for water projects, e.g., dams, where the surrounding lands were subsequently turned over to another agency for management. Such is the case with Lake Mead and Glen Canyon NRAs. In more recent years, however, NRAs have been designated in many other kinds of environments where recreational values are high. The primary purpose of an NRA is to protect, develop and enhance outdoor recreation opportuni-

ties. This contrasts with the focus of National Monuments and National Conservation Areas, which may provide for recreation but are primarily established to protect natural and cultural resource values. The National Park Service, the Bureau of Land

Management, and the U.S. Forest Service all administer NRAs, ranging in size from a few acres to the largest in the United States, the one million-acre White Mountains NRA in Alaska managed by the BLM.